

UVA COVID-19 MODEL WEEKLY UPDATE



July 23rd, 2021

KEY TAKEAWAYS

- The Delta variant is likely dominant in Virginia creating increased risk for unvaccinated individuals and communities with low vaccination rates.
- First dose vaccinations have plateaued, and show early signs of dipping in the past week.
- Most health districts have entered growth trajectories, and two is in a surge trajectory. This is consistent with cases plateauing at very low levels.

4 per 100k

Average Daily Cases Week Ending July 11, 2021

32 per 100k

Potential Peak Average Delta Variant Scenario Daily Cases, Week Ending September 5, 2021

5,639

Average Daily 1st Doses July 11, 2021

6,128

Average Daily 2nd Doses July 11, 2021

KEY FIGURES

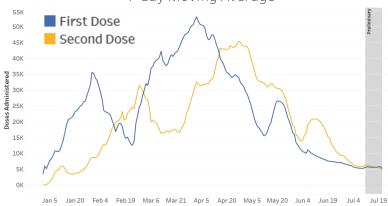
Reproduction Rate (Based on Confirmation Date)

Region	R _e July 20th	Weekly Change
Statewide	1.175	0.128
Central	1.105	0.178
Eastern	1.167	0.051
Far SW	0.989	-0.013
Near SW	1.248	0.248
Northern	1.201	0.043
Northwest	1.167	0.092

Vaccine Administrations

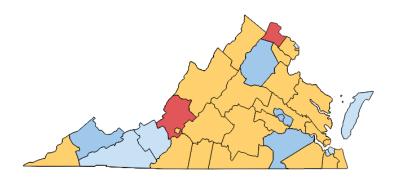
Average Daily Doses:

7-day Moving Average



Growth Trajectories: 2 Health Districts in Surge

Status	# Districts (prev week)
Declining	5 (2)
Plateau	6 (23)
Slow Growth	22 (9)
In Surge	2 (1)







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THE MODEL

The UVA COVID-19 Model and the weekly results are provided by the UVA Biocomplexity Institute, which has over 20 years of experience crafting and analyzing infectious disease models. It is a (S)usceptible, (E)xposed, (I)nfected, (R)ecovered epidemiologic model designed to evaluate policy options and provide projections of future cases based on the current course of the pandemic.

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THE PROJECTIONS

The UVA team continues to improve the model. The UVA model uses an "adaptive fitting" methodology, where the model traces past and current trends and uses that information to predict future cases at the local level. Since the B.1.1.7 Variant has become dominant, the model includes increased transmission and severity associated with this Variant of Concern. The "Delta" scenarios adds the known effects of the Delta Variant of Concern to transmission rates. The model incorporates projections on the impact of vaccines, including current vaccinations and the stalled rate of vaccine uptake. The "VaxOpt" scenarios show the impact of vaccine acceptance increasing to 85% of the adult population.

MODEL RESULTS

The COVID situation has changed drastically over the past couple of weeks. Previously, cases had been declining or plateaued in most Health Districts. Now, most are on growth or surge trajectories. Vaccination rates are still below herd immunity levels, many Virginians are returning to normal, and the Delta variant is beginning to to spread in Virginia. With the Delta variant, it is likely cases reach a sustained peak with 32 average daily cases per 100,000 beginning in August and lasting well into the fall. Vaccinations are essential to reducing the number of cases. In the meantime, we must give vaccines time to work, especially as the Delta variant spreads in Virginia. Do your part to stop the spread. Continue to practice good prevention and get vaccinated when eligible.

